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# Introduction

*Math Mammoth Grade 7-B Worksheet Collection* contains worksheets covering about half of typical 7th and 8th grade mathematics topics (pre-algebra). These are just worksheets with problems to solve. In other words, this is a worksheet collection without textbook explanations.

The worksheets are variable, with numerous word problems and problems that emphasize understanding. They are not made by a script, but hand-crafted one by one.

The 7-B collection contains worksheets for the latter part of seventh grade. The topics include proportion and percentage, statistics and graphs, probability, geometry, right triangles, and polynomials.

Ratios, proportion, and percentage are often difficult for students. You will find many worksheets about ratios, proportions and proportional reasoning. Included are also several exploratory worksheets about slope and proportional relationships.

Percentage worksheets start out with a worksheet that concentrates on the “nitty-gritty” of what the concept of percentage actually is. Mental math in using percentage is the focus of one worksheet, because I feel strongly that students must not just rely upon memorized procedures when doing percentage problems. Doing mental math helps students understand what percentage is all about.

Later on, the worksheets contain plenty of word problems where percentage is used.

Statistics worksheets cover a large variety of graphs and concepts, including scatter plots, box-and-whisker plots, and stem-and-leaf plots. After that come probability sheets.

The geometry section concentrates on constructions, the concept of similar triangles and other figures, and finding areas, surface areas and volumes of basic three-dimensional figures (solids). You will find plenty of drawing problems and word problems.

The section on right triangles deals with square roots and the Pythagorean theorem. There is also one worksheet about the very basic idea of sine as a ratio, and one worksheet on the other two trigonometric ratios.

Lastly, the section on polynomials better fits eighth grade but is included here for the sake of completeness.

*I wish you success with teaching math!*

*Maria Miller, the author*